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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/419,923	10/18/1999	QUINTON LYON	33632-0312	2080

7590 07/02/2004

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EXAMINER
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PIHULIC, DANIEL T

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/419,923

Applicant(s)

LYON, QUINTON

Examiner

Daniel Pihulic

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 8-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 3662

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 12 is rejected under 35 U.S.C. 112, first paragraph, because claim 12 is a single means claim. A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor. See MPEP 2164.08(a)

3. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. It is not clear how a control computer could be programmed to perform the step of providing a transducer assembly.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 8 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by US4282589. The US4282589 reference discloses the utilization of a pulse echo ranging system (12) that can send and receive high frequency acoustic energy (see abstract, line 3); transmitting two energy pulses having substantially different frequencies (see abstract, lines 6-7); receiving reflected echoes of the two energy pulses (see abstract, lines 8-9); converting the reflected echo signals to received signals (see abstract, lines 9-10); and combining (multiplier **114**) the received signals to provide enhanced data (**10a**) as recited in claim 8.

With regards to claim 11, multiplier (**114**) is essentially correlating the signals and thus meeting the comparing step.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over US4282589 in combination with US4188608. The US4282589 reference discloses the utilization of a pulse echo ranging system (12) that can send and receive high frequency acoustic energy (see abstract, line 3); transmitting two energy pulses having substantially different frequencies (see abstract, lines 6-7); receiving reflected echoes of the two energy pulses (see abstract, lines 8-9); converting the reflected echo signals to received signals (see abstract, lines 9-10); and combining (multiplier 114) the received signals to provide enhanced data (10a) as recited in parent claim 8. The difference between the US4282589 reference and the claim is that the claim recites the utilization of a control computer. The US4188608 reference teaches that it was well known in the art to utilize a solid state (see column 1, lines 50-52) dual pulse (see abstract and FIG.1) acoustic ranging system. It would have been obvious to modify the US4282589 reference to utilize integrated circuit technology as motivated by the US4188608

reference to enable the US4282589 system to be made waterproof, shockproof, durable, smaller and cheaper (see column 1, lines 50-56).

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over US4282589 in combination with US4439845. The US4282589 reference discloses the utilization of a pulse echo ranging system (12) that can send and receive high frequency acoustic energy (see abstract, line 3); transmitting two energy pulses having substantially different frequencies (see abstract, lines 6-7); receiving reflected echoes of the two energy pulses (see abstract, lines 8-9); converting the reflected echo signals to received signals (see abstract, lines 9-10); and combining (multiplier **114**) the received signals to provide enhanced data (**10a**) as recited in parent claim 8. The difference between the US4282589 reference and the claim is that the claim recites the utilization of differencing means. The US4439845 reference teaches that it was well known in the art to utilize a dual pulse acoustic ranging system (see abstract and FIG. 1) that provides a difference amplifier (**38**) for the echoes or the two transmitted signals. It would have been obvious to modify the US4282589 reference to utilize a difference amplifier as motivated by the US4439845 reference to enable the US4282589 system to positively identify certain targets.

9. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Pihulic whose telephone number is 703-306-4168. The examiner can normally be reached on Monday through Thursday from 7 a.m. to 5 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza, can be reached on 703-306-4171.

The fax phone numbers for the organization where this application or proceeding is assigned are:

703-872-9306 for official responses, and

703-746-3847 for unofficial communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Daniel Pihulic**  
**Primary Examiner**  
**Art Unit 3662**